TELEPATCH

THE TELEWRITER 64 ENHANCER

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64K DISK $19.95

SPECTRUM PROJECTS INC.

FEATURES ARE:
TRUE BLOCK MOVE
OVERSTRIKE AND TSPOOL MODE
TYPE AHEAD BUFFER
FASTER DISK INPUT/OUTPUT

```
        TELEPATCH
   Telewriter64 Enhancer
      version 2.1

    By  Bob  van  der  Poel

   REFERENCE   MANUAL



    copyright 1985
```

```
           REQUIRES A
  64K RADIO SHACK COLOR COMPUTER
   WITH DISK OPERATING SYSTEM,
          1 DISK DRIVE
  AND TELEWRITER 64 DISK VERSION
```

```
      * * I M P O R T A N T * *
```

PLEASE BACKUP YOUR ORIGINAL DISKETTE BEFORE YOU CONTINE. THEN PUT THE
ORIGINAL IN A SAFE PLACE. NEVER WRITE TO THE ORIGINAL.

THIS SOFTWARE IS OFFERED FOR SALE ON AN "AS IS" BASIS. NO GUARANTEES
ARE MADE OR IMPLIED.

```
*****************
** INTRODUCTION **
*****************
```
                                z

     Thank you for purchasing TELEPATCH. We hope it will help you in
making the best word processor for the Color Computer even more
useful. If you have a friend that uses Telewriter, please show this
program to him. If he likes it, ask him to buy his own copy.
Continued customer support will enable the author to develop more
utilities for this program and correct any bugs that may pop up.
Continued sales also help to feed the family. Please do your part to
stop software piracy . . . it hurts everyone.

     Telewriter is one of the best word processors available for the
Color Computer -- unfortunately it was written to run in 16, 32 and
64K systems as well as disk and cassette systems. If you have a 64K
system, you have enough memory to add a number of extra features to
Telewriter -- features the author either didn't think about or didn't
have room for in the original program.

     Please do not write to the diskette that came with this package.
Use it only to create a new system disk, then put it away in a safe
place in case you need it to make a new system disk in the future. If
the disk does not have a write protect tab on it, you may wish to
place one on it to ensure its safety.

```
*****************************
** MAKING A NEW SYSTEM DISK **
*****************************
```

     To make a new system disk, first format a new diskette. Now get
out your original Telewriter diskette and the TELEPATCH diskette. Now
put the TELEPATCH diskette in drive 0 and type:

     RUN "PATCHR" <ENTER>

     Now follow the prompts the program will give you. Note that only
drive 0 is used to make the new disk.

     When the program is complete, you will have a new system disk
with the following programs on it:

     T/BAS
     */***
     TW64/NEW
     TSPOOL/BAS

The program T/BAS is the new boot program replacing U/BAS; */***
is the new disk driver replacing S/XXX and S/ASC; TSPOOL/BAS is
discussed later in this manual. To run your new version of
Telewriter, just type:

    RUN "T" <ENTER>

```
                     *************************
                     ** NEW EDITOR FEATURES **
                     *************************
```

Many new features have been incorporated into the editor. Some
are new commands, others simply correct minor bugs or irritations.
All will be discussed below.

1. True move

    A true move is one of the most needed features in Telewriter --
a feature you now have! To move a block of text, mark it with a begin
and end marker in the same manner as you would for a copy. Now move
the cursor to the destination and press the combination <CLEAR> <T>
(You can remember this as "Transfer"). The text will now be moved,
the original will be deleted and the screen will reformat.

    You may notice some garbage appearing on the screen during the
move -- this is normal since the screen area is being used as a
buffer. Sometimes, after the move is complete, you may notice an extr
cursor. Don't worry about that either -- it will disappear after a
new screen is displayed. The move is restricted to 6400 characters.
If you attempt to move a larger block an error message will appear
telling you how much too large the block is.

2. Visible carriage returns

    Often it is useful to have the carriage returns visible on the
screen. This is particularly true when you are setting up tables,
etc. or if you wish to see if there are any extra blanks at the end
of lines.

    If you wish to see the carriage returns, press the combination
<CLEAR> <I> (remember this as "invisible/visible toggle"). A special
marker will appear for every carriage return. To make them invisible
again, press <CLEAR> <I> again.

    Note that a <CLEAR> <A> is automatically done every time you do
a <CLEAR> <I>.

3. Key beep

     Touch typists often like to have an audible reminder that a key
has been pressed. To turn on a key beep, press <CLEAR> <L> (we're
running out of keys, but does "loud" make sense?). Now every time a
key (except <CLEAR>) is pressed, a beep will be heard on the T.V.
speaker. To turn the beep off, press <CLEAR> <L> again.

4. Key repeat

     All the keys will now repeat if they are held down for more than
about a half a second. Both the delya and repeat rate are adjustable
in the T/BAS program.

5. Justify

     The original version turns justify off after a file has been
printed -- a nuisance if you are printing a number of files and you
forget to turn it on each time. This new version doesn't turn it off
(unless you have an uneven number of 'control ;''s in your text).

6. Reset

     The original version did not allow 64K users to press RESET if
everything else went wrong. Reset protection has been added to your
new version. If you press RESET now, you'll return to the editor.

7. Disk I/O

     When you access the disk menu in the original version, the disk
often does quite a bit of grinding back and forth before it finds the
driver. This is because the last track number was not saved. This
oversight has been corrected and you will now find that you can
access the disk menu much more quickly.

8. Lowercase

     You will notice that every time you enter the editor, lowercase
will be on. When you enter the disk menu, lowercase will be off. This
feature can be defeated in "T.BAS". The <SHIFT> <0> combination still
works in the normal manner.

9. Disk 1.1

     The initialization routine checks for Disk Basic 1.1 and
configured the program if required.

10. Basic 1.2

    Users with Color Basic 1.2 will notice improved key response if you have an older version of Telewriter.

11. Eps/oki/lf fonts

    Due to an oversight the Epson font buffer was not properly cleared, causing strange things to happen at times if you set the Eps/oki/lf flag to on, but did not specify a font. This oversight has been corrected in this version.

12. Fast cursor movement

    The combination of <SHIFT> and an arrow key has been speeded up -- otherwise it would be the same as holding down an arrow key. This speed is modifiable in T/BAS.

13. Overstrike mode

    The original version of TELEWRITER gave you only insert mode -- that is, whenever you typed a character it was inserted into the text buffer at the cursor position and everything beyond this point was pushed up to make room for the character. You can now change your text with overstrike. To turn on overstrike, do a <CLEAR> <O>. Now the data at the cursor will be changed -- except in two special cases. If you attempt to change (overstrike) a carriage return or the end of a text marker, the current mode will default to insert. This means that if you are in overstrike mode and want to add text to the end of file all you need to do it type away. If you make a mistake, just backup and type over it. If you want to insert text in the middle of a document, just start typing at a carriage return.

    To exit overstrike mode to insert mode, just do another <CLEAR> <O>. You will notice that the cursor changes when you toggle between the two modes -- this is so you know the mode you're in.

```
***************************
** BOOT PROGRAM FEATURES **
***************************
```

    An entirely new boot program -- T/BAS has been written for the new version of Telewriter. This program replaces the U/BAS program that came with your original version. In addition to loading the main program much faster, it also allows the user to modify many defaults.

Starting with line 1000 are a number of POKEs that set various default parameters. To modify them, change the value after the comma using BASIC's edit routines and resave the modified program to your system disk.

The following list shows the line as it appears in the program. It also comments on changing its value:

    1050 POKE&HDAE5,&HF0 'colorset

A value of &HF0 will give the black on green text screen, a value of &HF8 will give the standard Telewriter, black on white screen. All other values are illegal and will cause unexpected results.

    1060 POKE&HB3,0 'number (msb)
    1070 POKE&HB4,0 'number (lsb)

These two pokes set the page numbering in the format menu. To calculate a different start value, use the following formula where "x" is the new value:

    msb = INT (x / 256)
    lsb = x − INT (x / 256) * 256

    1080 POKE&HD5,1 'spacing

The line spacing in the format menu can be any value between 1 and 255.

    1090 POKE&HDC,0 'queue

Any non-zero vslue will turn on the "Queue" option in the format menu.

    1100 POKE&H5A,0 'epson

This will set the "Eps/oki/lf" option in the format menu.

    1110 POKE&H3FA,0 'justify

Justify can be defaulted to on by storing any non-zero value here.

    1120 POKE&H3EE,0 'one page

A non-zero value will cause the "One page" option to be set.

```
1130 POKE&H102,0  'where
```

This sets the tab value for page numbering.

```
1140 POKE&HFD,50  'characters
```

The number of characters per line can be set with this poke. Note that a value of zero will override any alignment -- handy for editing programs.

```
1150 POKE&HC6,5  'upper margin
```

The upper margin value in the format menu.

```
1160 POKE&HF3,5  'bottom margin
```

The lower margin value in the format menu.

```
1170 POKE&HFF,10  'left margin
```

The value for margin in the format menu.

```
1180 POKE&HD2,66  'lines/page
```

The number of lines per page in the format menu.

```
1190 POKE&H96,87  'baud rate
```

The printer baud rate. The following values can be used:

```
     value              baud rate
     180                  300
      87                  600  standard rate
      41                 1200
      18                 2400
       7                 4800  actually 4700
       1                 9600  actually 9400
```

```
1200 POKE&HFEFF,1  'default I/O
```

Any value other than 1 will cause the ASCII disk menu to appear when you select the disk menu.

```
    1210 POKE&HFECD,0  'klick off
```

A value of 255 (&HFF) will cause the klick to be on when you first enter the editor. It can then be turned off with the <CLEAR> <L> command. Any value other than 0 or 255 will defeat the <CLEAR> <L> command and key klick will be permanently on.

```
    1220 POKE&HDA45,4 'klick length
```

The length of the key klick. Values you may try should be between 1 and 10. Longer values will slow the keyboard action down.

```
    1230 POKE&H8C,2  'klick tone
```

If the tone produced is not to your liking you may try different values for this POKE.

```
    1240 POKE&HDA19,35  'repeat rate
```

The rate at which keys repeat. The lower the value, the quicker the repeat. Values range from 1 (quickest repeat) to 255 (slowest).

```
    1250 POKE&HDA2D,4  'repeat delay
```

The time delay before keys begin to repeat. Values range from 1 (shortest delay) to 255 (longest).

```
    1260 POKE&HDAEA,4  'shift rpt dly
```

The speed at which the <SHIFT> arrow key combinations repeat. The standard Telewriter value is 10. Values range from 1 (fastest movement) to 255 (slowest).

```
    1270 POKE&HFEFE,2  '#of drives
```

This sets the number of drives available in your system. Permissible values are 1 to 4. The supplied program is configured for a two drive system.

```
    1280 POKE&HFEFD,1  'case toggle
```

This POKE flags the automatic case toggling feature. If any non-zero value is used, lowercase will be enabled when you enter the editor from either the disk menu or on start-up. If zero is used, you will have to do an explicit <SHIFT> <0> to change to lowercase when entering the editor. This may be of use if you are using TELEWRITER for editing a BASIC program, or other mostly uppercase files.

The <SHIFT> <0> case toggle will still toggle lowercase on/off, no matter what the value POKEd is.

    1290 POKE&HFEFC,0 'verify

    A special verify flag is maintained for the use of the disk driver. Since TELEWRITER turns verify off each time it accesses the disk driver, an instruction is the driver must do a VERIFY ON if you wish to use this option. This statement has been incorporated into */***. To automatically have verify turned on for disk I/O, change the value to 1 (or any other non-zero value). The default is currently set so the verify in not turned on for disk I/O.

    1300 POKE&H3F9,0 'default drive

    This POKE sets up the default drive for disk I/O. If you set it for a value greater than the number of drives set in line 1270 the value of 0 will be used.

    1310 POKE&HFEVE,0 'insert mode

    The mode (overstrike or insert) can be selected by this POKE. If you would like to start-up in overstrike mode, set the value to 255 (&HFF). Note that any value other than 255 or 0 will put you into the overstrike mode permanently.

    1320 DATA 2   :'stepping rate

    This is the value used to set the track stepping rate for your disk drives. The following table shows the permissible values:

value	stepping rate
3	30 ms.
2	20 ms.
1	12 ms.
0	6 ms.

    If you have standard Radio Shack disk drives, you should be able to use the 20ms. Rate that T/BAS is configured to. If you get I/O errors, change it to 3 for standard 30ms. Rate. If you have other after market drives you may be able to use an even faster rate. Note that if you have more than one drive, they will all operate at the new speed. Please note, also, that this is a DATA statement, not a POKE.

```
***************************
** DISK DRIVER FEATURES **
***************************
```

An entirely new disk driver has been written to handle disk I/O.
Not only does this program speed up ASCII reads and saves, many other
features have been incorporated. The new driver is called */*** to
distinguish it from the standard S/XXX driver.

1. ASCII or BINARY

The first thing you will notice is that there is only one driver
-- not two as the original program needed. To switch between ASCII
and BINARY just press <I>. The program remembers the last state it
was in and will start up in the last format the next time you go to
the disk menu from the editor.

2. Name extensions

The ASCII driver uses the extension "TXT", the BINARY driver the
extension "BIN" for I/O, including KILL and RENAME. Note that if you
enter a name without a drive number or extension, the default drive
number and extension will be added to the input name and displayed.
Note also that the "." may be used instead of the "/" when entering
extensions (in fact this is the format used by the default names).

NOTE: The "." cannot be used when specifying filenames (in text
after 'control Q') to be chain printed. This is an oversight in the
original program, not an effect of the patch.

3. Uppercase toggle

When the disk menu us entered, lowercase is turned off and when
you return to the editor it is turned on. Of course the <SHIFT> <0>
combination still works in the normal manner. If you do not wish this
feature, see the comment above in "Boot program features" under
"Defaults".

4. Default filenames

After all successful reads, saves, appends, and partial saves
the filename used will be saved. This name will appear to the left of
the "FILES" line in both the disk and editor menus. If you wish to
use this filename to read or write a future file, just press <ENTER>
in response to the filename prompt. The default filename will be
displayed beside the command selected, along with a "y/n." If you
wish to use the name displayed, press "Y." Any other key will abort

the command. Sometimes you may wish to change the default filename, without doing a read or save. This may happen if you append a file to a file already in memory, but you still wish to use the original filenames as a default. For this reason the "@" option has been included. To us it, press <@> in the main menu. You will now see a cursor positioned above the default filename. You can now enter a new default filename. It is possible to enter an illegal filename at this point: For example, if you enter MYFILENAME, and you are in the ASCII menu with a drive default of 1, the program will convert this name to MYFILENAME.TXT:1, an illegal name. It will then save the first 14 characters in the default filename buffer (MYFILENAME.TXT). If you used this illegal name as a default in response to a save or read prompt, an FN error would result -- not a problem, but something you should be aware of.

5. Sure?

    A "SURE y/n" will be displayed if you select the "Kill" option, or if you select the "Read" option when any other data is already in memory. To continue, press <Y>. Any other key will abort the command. This response requires an uppercase <Y> -- some head-scratching might occur if you disabled the lowercase toggle in T/BAS and were not aware of this requirement.

6. Returning to Editor

    You will be returned to the editor after any successful reads (not appends) or if you use the "Editor" option. After appends you will return to the I/O menu -- very handy if you have a number of files to append.

7. Error messages

    After any error, the BASIC error message will be displayed. For there meanings, refer to the disk operating manual. The only exceptions to this are the following three error messages:

        DRIVE# TOO HIGH

    This message will be displayed if the drive selected for a disk operation (any disk operation) is higher than the maximum vale set in line 20.

        FILE TO BIG BY xxx

    This message will be displayed if you attempt to read or append a binary file larger than available memory.

BUFFER FULL—ENTIRE FILE NOT READ

This message will be displayed if when reading an ASCII file, there is still data in the file after the text buffer has been filled. After any error, press any key to return to the disk I/O menu.

8. Other commands

The other commands available in the standard drivers are all still available and work as described in the original documentation. The only two changes you will notice are first, the "Files"/"Print dir" option. If you have only one drive, you will not be asked for a drive number. If you have 2 or more, you will be asked in the normal manner. Second, a sure? Prompt has been added to the "Kill" option.

9. A note about ASCII files

TELEWRITER ASCII files have a special format when it comes to control characters. When creating as ASCII file, TELEWRITER saves control characters as an CHR$(94) (an up arrow) followed by a character between CHR$(95) – CHR$(107). This may create a problem if you are reading in files created by another program besides TELEWRITER, since the ASCII read routine checks for CHR$(94) and assumes that the character following it is a control character. To eliminate the possibility of garbage appearing on the screen, the routine used by */*** also checks to see that the second character is less than CHR$(108); if it isn't then it is assumed to be an illegal control code and it, as well as the CHR$(94), are ignored. The point of all this is: you may have created an ASCII file containing CHR$(94)'s (for example, BASIC programs use this character to represent exponentiation), then you will lose data when you read in the file. The solution to this is to use a short BASIC program to convert the CHR$(94) to another, seldom used, character. Then when you are finished, use the another program to convert the file back if necessary.

Another point that you should be aware of is that all characters less than CHR$(32) (SPACE) and greater than CHR$(122) (z) are ignored by the ASCII read routine.

NOTE: The above discussion applies to the original version of TELEWRITER as well as your new patched version. Also, there is no problem with files created by TELEWRITER itself, this problem only presents itself with files created by other programs (and then only occasionally).

```
***********
** TSPOOL **
***********
```

Included in this version at no extra cost is the program
"TSPOOL." This utility will permit you to print a file to a disk file
rather than to the printer. This will enable you to use TELEWRITER's
formatting capabilities to produce text files that you can print out
at a later time.

To use "TSPOOL" simply go to the disk I/O menu and press <B>.
You are now in BASIC. Now load and run "TSPOOL."

You will see a menu similar to the format menu. Set the margins,
etc. and when you are ready to print the file, press <P>. You will be
prompted for a disk file name. Enter the name in the regular manner,
press enter, and the file will be opened, the text will be "printed"
to it. You will now be prompted for another filename. If you enter a
filename at this point, another file (only BINARY files allowed) will
be loaded and printed to the still open file. Pressing <ENTER> will
close the file and the menu will reappear. You now have a file that
can be read from BASIC with the LINE INPUT commands.

To exit TSPOOL press <E>. You will now see a mini-menu giving
you three options:

1. Return to BASIC -- this will just end the program.
2. Cold start to BASIC -- this will reset the computer, etc.
   Make sure that you have save your text file if you selected
   this option.
3. Return to Disk I/O -- this option will run the disk I/O
   program. Make sure your system disk is in drive 0 if you
   select this option, otherwise an error will occur.

Limitations

The only limitation wit TSPOOL is that it does not permit queued
files either with embedded "Q" commands or with cassette queueing.
Otherwise everything works in the normal manner. One other
complication occurs when you try to read a spooled file. If you use
INPUT commands, you will lose all your commas since BASIC will
interpret commas and carriage returns as line ends. On the other
hand, if you use LINEINPUT then the lines will be read properly, but
if you have used any printer control codes (any ASCII character less
than 32 or greater than 127) they will not be included in the
resulting string. This is a constraint of BASIC, not TSPOOL. To
overcome the difficulty you would have to read the file byte by byte

with a machine language subroutine. Note that this is only a problem
if you include printer directives, it is not a problem with straight
text files.

```
        *******************
        ** STRANGE DOSes **
        *******************
```

      TELEPATCH expects to find a DOS version number at memory
location $C142. If this value us not $30, RS-DOS 1.1 is assumed. If
your modified DOS has changes the copyright message you will have to
add the following line to T.BAS:

      15 POKE &HC142, $H30

Please note also that in order to add the features in this package
memory locations unused by RS-DOS (from $D8D0 to $DC00) have been
used. If your new DOS also uses this area, conflicts will arise. The
DOS code in 1.1 has also been overwritten; don't use the DOS command
if you enter BASIC from the disk menu!

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      TELEPATCH, the programs */***, T/BAS, TSPOOL and PATCHR as well
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Supplement to Telepatch Instructions
      Telepatch now includes some useful additional features. They are
the following:

RAM-resident disk I/O module

      You will no longer need to wait in order to have the disk I/O
menu be loaded in from disk each time you need to access this menu.
You can instead elect to have */*** (Telepatch's version of the
original S/XXX) be resident in RAM throughout. This choice will cause
the disk menu to appear almost instantly whenever you press D from
the main menu. However, the space taken up by having the disk module
permanently in RAM comes out of the text buffer size, which is
reduced from Telewriter's usual 24,889 characters to 20,793
characters under this option. The PATCHR/BAS program will allow you
to choose when creating your user disk whether you would rather have
the instany access to the disk menu, or the additional 4K of text
buffer space. If you elect the RAM-resident disk module, */BIN,
rather than */***, will be a required part of your user disk.

Buffered keyboard

      One problem with the original Telewriter was its tendency to
drop occasional typed characters, particularly on insertion. The new
Telepatch totally cures this difficulty by the use of a new keyboard
input routine which remembers what characters have been typed, even
if you type faster than the screen can be updated. If you "get ahead"
of the screen, don't worry; the screen will "catch up" when you
pause. The file KBD/BIN on your user disk contains the new keyboard
routine.

Other changes

      The cassette choices <R>ead In, <S>ave, <%>save, <A>ppend, and
<V>erify no longer appear in the main menu, in order to reduce the
potential for confusion with the corresponding disk functions. These
cassette functions are still fully operational and work as before.

      The number of characters used, as well as the space available,
is now displayed as part of the disk menu.

      Telepatch is compatible with ADOS, but ADOS users will need to
insert a DISABLE command at the beginning of T/BAS, and will also
need to DISABLE prior to running PATCHR/BAS to create their Telepatch
user disk.

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